

IN THE CLAIMS:

Please cancel claims 3, 4, 10 and 13. **Please also amend** claims 1, 2, 11, 12, and 14-16, and **add** new claims 17-23, as shown in the complete list of claims that is presented below.

1. (currently amended) A method of forming a silicon-on-insulator device, comprising:
defining an active region in a silicon-on-insulator substrate;
doping the entire active region a first time with ~~an impurity of a certain~~
~~conductive type; boron;~~
masking a main part of the active region; and
doping peripheral parts of the active region at least a second time and a third time
with ~~an impurity of said certain conductive type. boron or indium at different projection~~
ranges.

2. (currently amended) The method of claim 1, wherein the impurity used is boron the
second time ~~or and indium~~ the third time ~~has a higher atomic number than the impurity~~
~~used the first time. time, or indium the second time and boron the third time.~~

Claims 3 and 4 (cancelled).

5. (original) The method of claim 1, wherein the peripheral parts of the active region are
doped the second and third times by ion implantation.

6. (original) The method of claim 5, wherein mutually different ion implantation
energies are used the second time and the third time.

7. (original) The method of claim 5, wherein the peripheral parts of the active region are
doped by ion implantation a fourth time in addition to the second time and the third time,
mutually different ion implantation energies being used the second, third, and fourth
times.

8. (original) The method of claim 1, wherein the silicon-on-insulator substrate is of the fully depleted type.

9. (original) The method of claim 1, wherein defining the active region comprises local oxidation of silicon.

Claim 10 (cancelled).

11. (currently amended) The method of claim ~~10~~, 15, wherein the active region has a maximum thickness permitting full depletion during operation of the silicon-on-insulator device.

12. (currently amended) The method of claim ~~11~~, 15, wherein:

the second average projection range is greater than the first average projection range;

the first average projection range is at most thirty nanometers less than the maximum thickness of the active region; and

the second average projection range is at most ten nanometers less than the maximum thickness of the active region.

Claim 13 (cancelled).

14. (currently amended) The method of claim ~~13~~, 15, wherein the ions implanted into the peripheral parts of the active region with the first and second average projection ranges are boron difluoride ions.

15. (currently amended) ~~The method of claim 13~~ A method of forming a silicon-on-insulator device, comprising:

defining an active region in a silicon-on-insulator substrate;

doping the entire active region with boron;

masking a main part of the active region;

implanting ions into peripheral parts of the active region with a first average projection range; and

implanting ions into the peripheral parts of the active region with a second average projection range different from the first average projection range, wherein:

wherein the ions implanted into the peripheral parts of the active region with the first average projection range are boron difluoride ions; and

wherein the ions implanted into the peripheral parts of the active region with the second average projection range are indium ions, the second average projection range being greater than the first average projection range.

16. (original) The method of claim ~~13~~, 15, wherein the ions implanted into the peripheral parts of the active region with the first and second average projection ranges are indium ions.

17. (new) A method of forming a silicon-on-insulator device, comprising:
defining an active region in a silicon-on-insulator substrate;
doping the entire active region a first time with phosphorus;
masking a main part of the active region; and
doping peripheral parts of the active region at least a second time and a third time with phosphorus or antimony at different projection ranges.

18. (new) The method of claim 17, wherein the impurity used is phosphorus the second time and antimony the third time or antimony the second time and phosphorus the third time.

19. (new) The method of claim 17, wherein the peripheral parts of the active region are doped the second and third times by ion implantation.

20. (new) The method of claim 19, wherein mutually different ion implantation energies are used the second time and the third time.

21. (new) The method of claim 19, wherein the peripheral parts of the active region are doped by ion implantation a fourth time in addition to the second time and the third time, mutually different ion implantation energies being used the second, third, and fourth times.

22. (new) The method of claim 1, wherein the silicon-on-insulator substrate is of the fully depleted type.

23. (new) The method of claim 1, wherein defining the active region comprises local oxidation of silicon.